

REMARKS:

Claims 1-9, 11, 56-58, 62-69, 71-78, 80 and 81 are pending.

For the convenience of the Examiner, attached at the end of this document is a clean "Claims Appendix" of the current wording of all pending claims.

In the Final Rejection referenced above, the independent claims previously limited to filtering the heated roasting air to remove substantially all pollutants from it so that nonpolluting air can be discharged into a closed environment were rejected for obviousness. The Final Rejection noted that the claims do not recite specific filter structures and, therefore, general filtering means were considered to read on the claims.

During a telephone interview between Examiner Becker and the undersigned on or about May 30, 2001, the undersigned discussed with Examiner Becker amending these claims by reciting therein that the filtration system includes a catalytic converter, as is disclosed on page 26 of the present application. Examiner Becker indicated that this addresses the point mentioned on page 2 of the Final Rejection but requires a further search and consideration. In view thereof, applicants have correspondingly amended these claims and filed an RCE to have the claims further considered.

The prior art of record contains no mention of any sort to employ a catalytic converter for cleaning the heating air that became contaminated during coffee roasting. Accordingly, independent claims 1, 11, 56, 62, 80 and 81, and claims 2-9, 57, 58 and 63-69 depending from these claims, are not obvious and, therefore, are allowable.

The only other independent claim, claim 71, is directed to a different aspect of the present invention, namely generating a second parameter "which reflects a predetermined development of the first parameter during roasting" and "adjusting the roasting step when the second parameter indicates that a *deviation from the predetermined development of the first parameter occurred to thereby reestablish the predetermined development of the second parameter*". The *development* of the first parameter relates how the desired ultimate color (or degree of darkness) is attained, not when it is attained. In this regard, the paragraph bridging pages 5 and 6 of the present application states in relevant parts:

“A very important advantage of the present invention is that it permits one to replicate roasting results by using the darkness (or color) development time line for the beans being roasted

This is central to maintaining the consistency of the roasts and is not just a function of the final darkness (or color) of the beans.

How that darkness is attained also determines the final profile of the roasted product, e.g. the roasted beans, because the same darkness (or color) can be attained over a wide range of roasting times, which in turn depends on other parameters such as, for example, the roasting temperature. The profile of the roasted beans will vary greatly based on how the ultimate color was attained. Thus, the key to consistency in the profile is to roast the beans in the same way, time after time. This is accomplished ... [by] maintaining the preestablished darkness (or color) development time line and parameters. In the past this was impractical, if not impossible, because there was no real-time color monitoring of the beans being roasted inside the roasting drum.”

Claim 71 was rejected over Porzi, which was characterized as disclosing amongst others “a comparator which ends the roasting when the signal from the colorimeter and photodetector are equal (column 4, lines 22-26)”. Applicants agree as to the teaching of Porzi. In contrast to Porzi, however, claim 71 requires “adjusting the roasting step when the second parameter indicates that a deviation from the predetermined *development* of the first parameter occurred to thereby reestablish the predetermined *development* of the second parameter”.

As the above quotation from pages 5 and 6 of the present application explains, the *development* of the first parameter (e.g. darkness or color) is different from attaining a desired darkness or color. The profile, that is, the taste and aroma, of the roasted beans varies greatly based on how the ultimate color was attained. Consistency in taste and aroma requires

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that the color be consistently developed by maintaining preestablished darkness (or color) development timelines and parameters.

Porzi only determines when there is a color match. It has no means and contains no disclosure whatsoever to monitor how that color develops, for example in terms of time required to attain the desired color. In contrast, claim 71 requires adjustments when the color development, for example, deviates from the desired development. Since neither Porzi, nor any of the other references of record, take the color development into consideration, claim 71, and therewith claims 72-78 depending from it, are not obvious and, therefore, are allowable.

In view of the foregoing, applicants submit that all pending claims are in condition for allowance and requests a formal notification thereof at an early date.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,


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MARKED-UP VERSION OF THE CHANGES TO THE CLAIMS

1. (four times amended) A method of roasting coffee beans comprising the steps of establishing the degree to which the coffee beans must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the coffee beans have been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh coffee beans at a roasting temperature by flowing heated air over the fresh coffee beans; filtering substantially all pollutants from the heated air following the roasting step, including flowing the heated air through a catalytic converter; thereafter reheating and recirculating a relatively major portion of the substantially pollutant-free air over the fresh coffee beans to thereby continue roasting; discharging a relatively minor portion of the filtered air while reheating and recirculating the relatively major portion of the air for further use during roasting; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh coffee beans during roasting; and, upon detecting a match between the first and second parameters, discontinuing the roasting step.

11. (four times amended) A method of automatically roasting coffee beans to attain a predetermined, desired coffee aroma comprising the steps of roasting a sample of the beans to a degree at which coffee made with the beans exhibits the desired aroma; sensing one of a color and a darkness of the beans when the beans have reached the degree of roasting and from the sensed color or darkness generating a first parameter which is indicative of the sensed color or darkness of the bean sample; storing the first parameter; thereafter roasting a batch of more than one pound of fresh beans by flowing heated air over the fresh beans; cleaning the heated air after it has passed the fresh beans so that the air is substantially pollutant-free by flowing it through a filtration system including a catalytic converter; cooling the air after the air has passed the fresh beans to about room temperature while continuing flowing the heated air over the fresh beans; discharging the cooled, pollutant-free, room temperature air into a substantially closed room frequented by humans; monitoring one of the color and darkness of the fresh beans being roasted and generating a second parameter which is indicative of a color or darkness of the fresh beans; comparing the first and second parameters during roasting of

the fresh beans; and terminating the roasting of the fresh beans when the first and second parameters match.

56. (five times amended) A method for uniformly roasting coffee beans at a plurality of geographically separate locations comprising placing a roasting machine at each location inside an enclosed room frequented by humans; equipping each roasting machine with a roasting container for holding fresh beans while the beans are being roasted, a hot air supply for heating the fresh beans to a roasting temperature, and an air removal system for directing used air away from the container; removing from the used air substantially all debris, smoke, oil, and other pollutants in a filtration system including a catalytic converter; after the step of removing, cooling at least a portion of the used air and recirculating any remaining portion of the cooled air to the hot air supply; discharging the at least a portion of used air in its entirety into the enclosed room while continuing heating the fresh beans; directing a laser light beam of a frequency in the range of between about 600-800 nm onto the beans in the container during roasting; generating an output signal from laser light reflected by the beans which is a function of the observed darkness of the beans; providing each roasting machine with a computer including a memory; feeding the output signal to the computer; at a central control station determining an optimal darkness for each bean type that will be roasted by the roasting machines; at the control station generating a control signal which reflects the optimal darkness of each roasted bean type; downloading the control signal from the central control station to the computer of each roasting machine; during roasting at any given roasting machine comparing the control signal stored in the associated memory with the output signal generated by the instrument; when the compared signals match, generating a command signal; and using the command signal to terminate the roasting of the beans in the container.

62. (twice amended) A method of roasting coffee beans comprising the steps of establishing the degree to which the coffee beans must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the coffee beans have been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting a batch of more than one pound of fresh coffee beans at a roasting temperature by flowing heated air over the fresh coffee beans; while flowing heated air over the fresh coffee beans removing substantially all pollutants from the air downstream of the fresh coffee beans being heated in a

filtration system including a catalytic converter, cooling at least a portion of the air downstream of the fresh coffee beans to substantially room temperature, and thereafter, while continuing to flow heated air over the fresh coffee beans, exhausting the cooled air directly into a room of a building without recirculating any part of the cooled air into the filtration system; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh coffee beans during roasting; and, upon detecting a match between the first and second parameters, discontinuing the roasting step.

80. (amended) A method of roasting coffee beans in a supermarket located inside a building comprising the steps of establishing the degree to which the coffee beans must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the coffee beans have been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh coffee beans at a roasting temperature by flowing heated air over the fresh coffee beans; while flowing heated air over the fresh coffee beans removing substantially all pollutants from the air downstream of the fresh coffee beans being heated, including flowing the heated air through a filtration system having a catalytic converter, cooling the air downstream of the fresh coffee beans to substantially room temperature, and thereafter, while continuing to flow heated air over the fresh coffee beans, exhausting the cooled air into the supermarket; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh coffee beans during roasting; and, upon detecting a match between the first and second parameters, discontinuing the roasting step.

81. (amended) A method of automatically roasting coffee beans to attain a predetermined, desired coffee aroma comprising the steps of roasting a sample of the beans inside a supermarket to a degree at which coffee made with the beans exhibits the desired aroma; sensing one of a color and a darkness of the beans when the beans have reached the degree of roasting and from the sensed color or darkness generating a first parameter which is indicative of the sensed color or darkness of the bean sample; storing the first parameter; thereafter roasting fresh beans by flowing heated air over the fresh beans; cleaning the heated air after it has passed the fresh beans so that the air is substantially pollutant-free, including flowing the heated air through a filtration system including a catalytic converter; cooling the

air after the air has passed the fresh beans to about room temperature while continuing flowing the heated air over the fresh beans; discharging the cooled, pollutant-free, room temperature air into the supermarket; monitoring one of the color and darkness of the fresh beans being roasted and generating a second parameter which is indicative of a color or darkness of the fresh beans; comparing the first and second parameters during roasting of the fresh beans; and terminating the roasting of the fresh beans when the first and second parameters match.